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(56) Documents Cited

**EP 0621574 A1 EP 0328320 A1 EP 0269542 A1**

(58) Field of Search

**UK CL (Edition O ) B8F FBG , D1K**

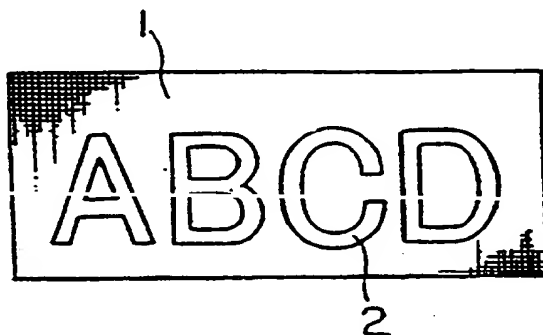
**INT CL<sup>6</sup> D03D 1/00 , G09F 3/02**

**ONLINE:WPI**

(54) **Forgery-preventing label**

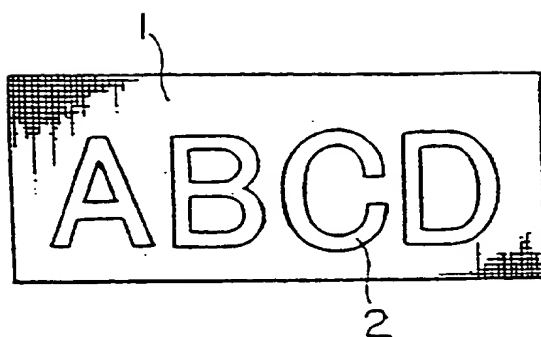
(57) A label comprises a woven or knitted emblem (1) having an identification mark (2) such as a trademark. Said mark is made of thread having fluorescent material applied thereon which will emit light when subjected to illumination with ultraviolet radiation, thus exhibiting a different colour to that in visible light. The fluorescent thread may comprise inorganic material selected from the group consisting of yttrium, europium and salts thereof. The colour may change from white in visible light to red, green, blue or purple in ultraviolet. The label may be used on a garment.

**FIG. 1**



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FIG. 1



## FORGERY-PREVENTING TEXTURED EMBLEM

## FIELD OF INVENTION

The present invention relates to identification labels, such as textured emblems bearing trademarks, distributors' names, manufacturers' names or the like which  
5 may be applied to garments, etc.

## BACKGROUND ART

Heretofore, the prior art has employed peculiar woven textures, special colors and/or peculiar styles of letters  
10 for the purpose of preventing forgery of articles of manufacture, such as garments.

While identification marks such as trademarks have heretofore been made in the form of textured emblems, printed names or labels, all of them can be easily forged  
15 in that if samples were given, it was possible to easily produce counterfeit articles which could not readily be distinguished from the genuine articles.

Should articles having forged trademarks or the like affixed thereon be found to be poor quality, the distributors or manufacturers would be obliged, in some  
20 instances, to accept returned goods, resulting in badly impairing the distributors' or manufacturers' credit.

For this reason, it was a common practice in the past to make emblems such as trademarks by the use of peculiar woven textures, special colors and/or peculiar styles of  
25 letters in an attempt to prevent forgery. Nevertheless, the method of manufacture could not be found out by

analyzing the structure and/or constituents, so that such emblems could easily be imitated and it was hard to discern forgeries.

#### DISCLOSURE OF THE INVENTION

5           Accordingly, the present invention contemplates providing a forgery-preventing identification label, comprising a textured emblem formed of a special material which makes it possible to detect any counterfeit despite any resemblance in appearance.

10           To this end, the present invention provides a forgery-preventing identification label, comprising a textured emblem having an identification mark such as letters, figures and/or other indicia woven or knitted thereinto, the mark being made of thread having inorganic fluorescent  
15           material applied thereon. The term "textured emblem" is intended to mean an emblem entirely (both the identification indicia and the background) woven or knitted of threads. Either one or both of the threads incorporated in the identification indicia and the background may be  
20           coated with inorganic fluorescent materials. That is, the fluorescent identification mark may be woven or knitted into the identification indicia, the background, or both.

          The forgery-preventing identification label according to the present invention will appear to be white or of  
25           other particular color under visible light, but due to the mark such as a trademark formed of inorganic fluorescent material-coated thread being woven into the emblem, and/or

background of the label, illumination of the emblem with ultraviolet radiation in the range of wavelength between about 300 nm and 400 nm, depending on the ambient lighting conditions, will immediately cause only that portion of the emblem having the mark to emit light of a particular shade inherent to the inorganic fluorescent material. It is thus to be appreciated that one glance is enough to discriminate any counterfeit made to imitate only the appearance of the real, because the counterfeit will not emit light when subjected to illumination with ultraviolet light.

In a second embodiment, the present invention relates to a method of identifying a genuine article of manufacture, comprising illuminating an identification label with ultraviolet light, the identification label comprising a textured emblem having fluorescent thread woven or knitted therein and being attached to the article of manufacture, and observing a fluorescent color of the thread.

In another embodiment, the present invention relates to a method of identifying a forged article of manufacture, comprising illuminating an identification label with ultraviolet light, the identification label comprising a textured emblem attached to the article of manufacture, and observing the absence of a particular fluorescent color incorporated in an identification label of a genuine article of manufacture.

## BRIEF DESCRIPTION OF THE DRAWINGS

The construction and features of this invention will be apparent from the following description of a preferred embodiment thereof taken in conjunction with the accompanying drawing in which:

Fig. 1 is a plan view of an embodiment of the identification label according to this invention.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to Fig. 1, there is shown an embodiment of the identification label and textured emblem according to the present invention. This emblem generally designated by the reference numeral 1 includes an identification mark 2 such as letters, figures and/or other indicia representing trademarks, distributors' names, manufacturers' names or the like. The mark 1 is made of thread having inorganic fluorescent material applied thereon and is woven or knitted into the emblem 1.

For the purpose of this invention, inorganic fluorescent materials having red, green, blue, purple or any other suitable color that will emit light of the characteristic color of the material when illuminated with ultraviolet radiation in the range of wavelength between about 300 nm and 400 nm may be used, either alone or in combination.

Inorganic fluorescent materials useful in the present invention include yttrium and europium or salts thereof. In a preferred embodiment, an inorganic fluorescent

material is coated on the thread, so that when irradiated with ultraviolet radiation at a wavelength between about 300 nm and 400 nm, a color different from that in visible light fluoresces, such as red.

5           As indicated above, the textured emblem of this invention including a mark such as a trademark formed of inorganic fluorescent material-coated thread will emit light of the characteristic color (or colors) of the fluorescent material (or materials) the instant that the  
10           emblem is illuminated with ultraviolet radiation, whereby anybody can readily distinguish an imitation article from a genuine article.

          It is thus to be understood that the present invention makes it possible for even distributors to easily verify  
15           identification marks, such as trademarks, put on goods returned from the market as substandard products, and lends itself to prohibiting forgery of identification marks.

          From the above discussion, many variations will be apparent to one skilled in the art that would yet be  
20           encompassed by the spirit and scope of the invention.

I Claim:

1           1.    A    forgery-preventing    identification    label  
2    comprising a textured emblem of woven or knitted letters,  
3    figures or other identifying indicia, said textured emblem  
4    having woven or knitted therein fluorescent thread having  
5    a first color in visible light and second color, different  
6    from said first color, in ultraviolet light.

1           2.    The identification label of claim 1, wherein said  
2    fluorescent thread comprises an inorganic fluorescent  
3    material selected from the group consisting of yttrium,  
4    europium and salts thereof.

1           3.    The identification label of claim 1, wherein said  
2    textured emblem is a trademark.

1           4.    The identification label of claim 1, wherein said  
2    fluorescent thread is woven or knitted into said letters,  
3    figures or other identifying indicia.

1           5.    The identification label of claim 1, wherein said  
2    fluorescent thread is woven or knitted into a background of  
3    said textured emblem.

1           6.    - The identification label of claim 1, wherein said  
2    fluorescent thread fluoresces in ultraviolet light of  
3    wavelengths between about 300 nm and 400 nm.



1           7.    The identification label of claim 1, wherein said  
2   second color is red, green, blue or purple.

1           8.    The identification label of claim 1, wherein said  
2   first color is white and said second color is red.

1           9.    A method of identifying a genuine article of  
2   manufacture, comprising illuminating an identification  
3   label with ultraviolet light, said identification label  
4   comprising a textured emblem having fluorescent thread  
5   woven or knitted therein and being attached to said article  
6   of manufacture, and observing a fluorescent color of said  
7   thread.

1           10.   The method according to claim 9, wherein said  
2   article of manufacture is an article of clothing.

1           11.   The method according to claim 9, wherein said  
2   textured emblem is a trademark.

1           12.   A method of identifying a forged article of  
2   manufacture, comprising illuminating an identification  
3   label with ultraviolet light, said identification label  
4   comprising a textured emblem attached to said article of  
5   manufacture, and observing the absence of a particular  
6   fluorescent color incorporated in an identification label  
7   of a genuine article of manufacture.

1           13. The method according to claim 12, wherein said  
2       article of manufacture is an article of clothing.

1           14. The method according to claim 12, wherein said  
2       textured emblem is a trademark.



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I Claim:

1. A forgery-preventing identification label comprising a textured emblem of woven or knitted letters, figures or other identifying indicia, said textured emblem having woven or knitted therein fluorescent thread having a first colour in visible light and a second colour, different from said first colour, in ultraviolet light, said fluorescent thread comprising an inorganic fluorescent material selected from the group consisting of yttrium, europium and salts thereof.



Application No: GB 9600979.0  
Claims searched: 1-14

Examiner: Stephen Smith  
Date of search: 15 February 1996

**Patents Act 1977**  
**Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.O): B8F (FBG); D1K

Int CI (Ed.6): D03D 1/00; G09F 3/02

Other: ONLINE:WPI

**Documents considered to be relevant:**

Category	Identity of document and relevant passage	Relevant to claims
X	EP 0621574 A1 (NAKAMURA) whole document	1, 3-14
X	EP 0328320 A1 (COURTAULDS) line 46 of column 1 to line 31 of column 2	9, 10, 12, 13
A	EP 0269542 A1 (FERRE BLANQUEZ) textile label 1 with phosphorescent threads 2-5	

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

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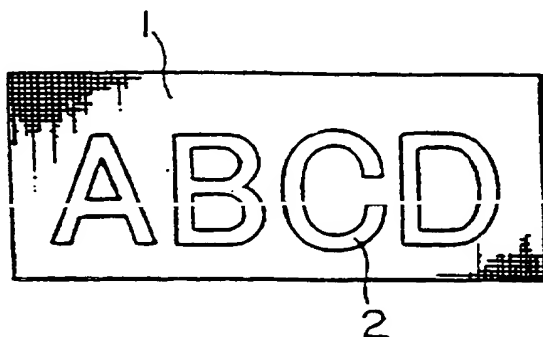
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ONLINE:WPI

(54) Forgery-preventing label

(57) A label comprises a woven or knitted emblem (1) having an identification mark (2) such as a trademark. Said mark is made of thread having fluorescent material applied thereon which will emit light when subjected to illumination with ultraviolet radiation, thus exhibiting a different colour to that in visible light. The fluorescent thread may comprise inorganic material selected from the group consisting of yttrium, europium and salts thereof. The colour may change from white in visible light to red, green, blue or purple in ultraviolet. The label may be used on a garment.

FIG. 1



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